

Philotheca citrina (Rutaceae), a new species from Western Australia

Paul G. Wilson

Western Australian Herbarium, Department of Conservation and Land Management,
PO Box 104, Como, Western Australia 6152

Abstract

Wilson, Paul G. *Philotheca citrina* (Rutaceae), a new species from Western Australia. Nuytsia 8(2): 245-248 (1992). A new species of *Philotheca*, that comes from the Austin Botanical District of Western Australia, is described and illustrated. Its relationship to other species of *Philotheca* and of *Eriostemon* sect. *Nigrostipulae* is discussed.

Introduction

In 1985 a new species of *Philotheca* was collected during a survey of the Murchison River basin in the Austin Botanical District (Beard 1980) by the Rangeland Management Branch of the Western Australian Department of Agriculture. The area was visited in September 1989 by Sue Patrick and Ray Cranfield of the Western Australian Herbarium who were able to relocate the plant and investigate its distribution and ecology: this account is largely based on their collections and notes.

Philotheca citrina Paul G. Wilson, sp. nov. (Figure 1)

Fruticis ramosissimus ad 1.3 m altus. Ramuli friabiles inter decurrentias foliaries sparse et minute puberuli. Folia in ramulis juvenilibus congesta, alterna, ut videtur exstipulata; lamina anguste clavata curvata c. 10 mm longa, 1-1.5 mm lata, supra aliquantum sulcata, manifeste undulato verrucosa, glabra vel basi versus sparse et minute puberula, apice obtuso-apiculato. Flores solitarii ad ramulos terminales. Pedunculus brevissimus crassus, resinosis, glaber. Pedicellus supra pedunculum articulatus, 2-4 mm longus, glaber. Sepala ovata 4-5 mm longa, glabra, in centro glandulosa. Petala late elliptica, obtusa, c. 10 mm longa, crassa, glanduloso punctata, intra minute tomentosa, extra glabra. Stamina pyramidalia, ad 7.5 mm longa; filamenta crassa, in 2/3 parte inferiore connata aliter libera, intra praeter apicem dense lanato pilosa, extra modice pilosa. Discus absens vel minutus, non visa. Ovarium depresso globosum; stylus teres glaber. Fructus non visa.

Typus: NNE of Curbur Station Homestead, Western Australia (precise locality withheld), 26° 23' S, 115° 58' E, 30 Aug. 1989, R.C. Cranfield 7665 and S. Patrick (holo: PERTH; iso: CANB, K, MEL, NSW).

Much branched *shrub* to 1.3 m high. *Branches* brittle, when young pale green, resinous, and sparsely and minutely puberulous between glabrous leaf decurrenties, becoming grey to black with age. *Leaves* dense on young branches, alternate, bright green, exstipulate or rarely with extremely

minute c. 2-celled stipules; lamina narrow clavate, curved, c. 10 mm long, 1-1.5 mm wide, somewhat narrowed towards base, flattened and indefinitely sulcate above, rounded below, conspicuously undulate verrucose with globular subepidermal glands, glabrous, or sparsely and minutely puberulous on adaxial surface near base; apex obtuse but apiculate with a pale brown necrotic tip. *Flowers* solitary and terminal to branches or to short branchlets. *Peduncle* short (to 1 mm long), thick, reddish brown and resinous, exceeding pedicel in diameter, glabrous; bracteoles not observed. *Pedicel* articulate on peduncle, narrow turbinate below, broad turbinate above, 2-4 mm long, glabrous. *Sepals* ovate, acute to obtuse, 4-5 mm long with a minute necrotic apiculum, thick and glandular verrucose in centre, thin towards margin, glabrous. *Petals* free, broad elliptic, obtuse, c. 10 mm long, very pale greenish yellow, thick, minutely tomentose within, glabrous outside, glandular punctate. *Stamens* pyramidally arranged, to 7.5 mm long, the antesealous slightly longer than the antepetalous; *filaments* thick, united in lower 2/3, otherwise free, linear, densely woolly pilose within except towards tip, moderately pilose outside, inflexed at tip; *anthers* oblong elliptic c. 1.5 mm long, minutely white apiculate; pollen pale orange. *Disc* not apparent. *Ovary* depressed globular, glabrous; *style* terete, glabrous, red with green apex; *stigma* minutely 5-lobed. *Fruit* not seen.

Additional specimen examined. WESTERN AUSTRALIA: Curbur Station, A.L. Payne 120 (PERTH).

Distribution. Only known from the type locality in the Austin Botanical District, Western Australia.

Habitat. Found in pockets of soil in cracks on a low red granite outcrop. Associated species on the outcrop were *Acacia aneura* Benth., *A. quadrimarginea* F. Muell., *A. palustris* Luehm., *Calytrix divergens* Craven, *Eremophila clarkei* F. Muell., *E. latrobei* F. Muell., and *Ptilotus obovatus* (Gaudich.) F. Muell. The surrounding plain was covered with Mulga (*Acacia aneura*) shrubland.

Conservation status. *Philothea citrina* was found to be plentiful on the one granite outcrop which extended for almost one kilometre; it was not found on other outcrops in the region but no search was made in the country lying to the north of Curbur Station. Although sheep and feral donkeys wander through the area there was no indication that mature plants were grazed. In view of the paucity of information on the distribution of the species a conservation category 'K' (Briggs and Leigh 1988) would appear to be appropriate.

Notes. There has been no revision of the genus *Philothea* since the account given by Bentham (1863), although brief notes have been provided by Wilson (1970, 1971) who indicated its distinction from *Drummondita* and its close relationship to *Eriostemon* sect. *Nigrostipulae*. He noted that the genus *Philothea* is morphologically similar to *Eriostemon* sect. *Nigrostipulae*, the two taxa being only separated by the presence of united stamens in the former and of free or almost free stamens in the latter. It has been pointed out by Armstrong (*ined.*) that the genus *Eriostemon* should be considered monotypic and that the species in *Eriostemon* sect. *Nigrostipulae* should be transferred to *Philothea*. From this it follows that whether the new species is considered to belong in the narrow sense to either *Philothea* or *Eriostemon* sect. *Nigrostipulae* it should be placed in the expanded genus *Philothea*. In the Eastern States all species that are considered to belong to *Philothea* and to *Eriostemon* sect. *Nigrostipulae* possess leaves with minute stipules that soon become covered by a black resinous secretion; in Western Australia half (eight) of the species of sect. *Nigrostipulae* have stipules and half do not.

Philothea citrina is the second species of the genus to be recorded from Western Australia, the first being *P. tubiflora* A.S. George which is known from a few granite outcrops near Leonora. *Philothea tubiflora* may be distinguished from *P. citrina* by its much shorter (c. 3 mm long) leaves, its prominent black stipules, and by its petals that are united in the lower half to form a tubular corolla.

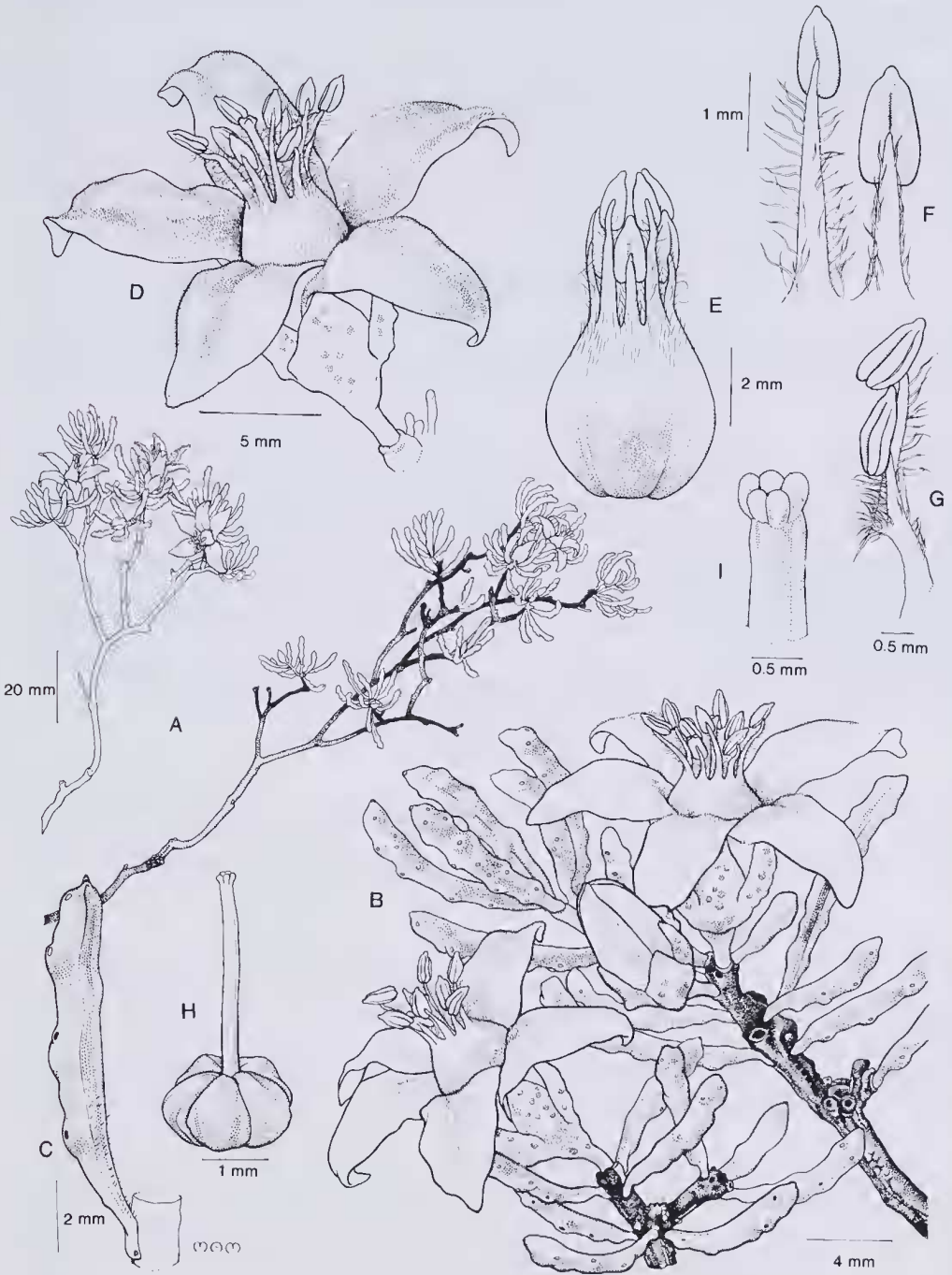


Figure 1. A - Branches. B - Flowering branchlets. C - Leaf. D - Flower with peduncle. E - Androecium. F - Antesealous and antepetalous anthers, abaxial view. G - Stamens, side view. H - Gynoecium. I - Style apex. Drawn from the type.

Eriostemon sericeus Paul G. Wilson from Western Australia is similar in appearance to *P. citrina* and in addition has stamens that are shortly united at the base which thus approach the situation found in *Philothea sensu stricto*.

The thick resinous peduncle that is present in *Philothea citrina* is also found, but in a less obvious condition, in *P. tubiflora* and *Eriostemon rhomboideus* Paul G. Wilson; in these two species a pair of bracteoles is present at the articulation of the peduncle and pedicel while in *P. citrina* the bracteoles are either not formed or, as seems more likely, they are shed early in the development of the flower.

Acknowledgements

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